



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/452,930	12/02/1999	CARL E. RADZIO JR.	79189CEB	1934

1333 7590 09/16/2002

PATENT LEGAL STAFF
EASTMAN KODAK COMPANY
343 STATE STREET
ROCHESTER, NY 14650-2201

EXAMINER

HECKENBERG JR, DONALD H

ART UNIT	PAPER NUMBER
----------	--------------

1722

DATE MAILED: 09/16/2002

12✓

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/452,930

Applicant(s)

RADZIO ET AL.

Examiner

Donald Heckenberg

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the CPA filed on August 13, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-4 and 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1722

1. The request filed on August 13, 2002 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/452,930 is acceptable and a CPA has been established. An action on the CPA follows.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, "a pressure relief valve... causes [the] molded part to be released from [the] cavity mold while [the] pressure relief valve is in a retracted state." This limitation is not understood. The pressure relief valve cannot act to cause the molded part to be released from the cavity if it is retracted. Further, there is no support in the disclosure for the pressure relief valve to act as an ejector which causes the molded part to be released from the mold cavity.

Art Unit: 1722

Applicant's remarks filed on August 13, 2002 state that this limitation intends to recite that this structure allows for the vented molten resin to come out of the mold with the part, as recited at p. 5, lns. 24-27 of the instant application. Therefore, in order to examine the claim in view of prior art, the claim will be interpreted as reciting this feature- that the molded part is ejected from the mold cavity as a whole, with the molded part including the resin molded in the first resin flow path, and the second resin flow path.

Appropriate clarification and correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 1722

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3-4, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto et al. (US Pat. No. 5,350,288; previously of record) in view of Nomura et al. (US Pat. No. 5,156,754; previously of record).

Kimoto teaches an injection molding apparatus comprising a screw cylinder (4) having a tip, a nozzle (9) at the tip, and a thread-screw (3) advanceable in the screw cylinder for injecting

Art Unit: 1722

the resin from the nozzle, the mold also comprising a cavity mold (33) and a core mold (34) forming a hollow (42) therebetween for forming an injected molded product therein, a first molten resin flow path (39 and 42) extending from inside the screw cylinder to a terminal end of the hollow, and a pressure relief valve (40) located on the resin flow path at the terminal end of the hollow. The valve of Kimoto is such that the valve would remain in an open state in which the valve is retracted while simultaneously the product is ejected from the mold, the product ejected including the part molded in the first resin flow path, and the part molded in the second resin flow path (see figs. 1-2). Kimoto teaches the pressure relief valve to comprise a movable pin actuated by a spring bias (50), the movable pin (48) being adapted for movement between a first position blocking the resin when the pressure is less than a predetermined value, and to a second position releasing the resin into a second molten resin flow path in fluid communication with the first resin flow path thereby relieving pressure in the first path (col. 5, ln. 55 - col. 6, ln. 5). Kimoto further teaches the mold to comprise stationary and movable portions for accessing the cavity along a parting line (51) with the valve located on the parting line.

Art Unit: 1722

Kimoto fails to teach the injection mold to be made from cast epoxy and thermo-set materials.

Nomura teaches the making of injection molds from cast-epoxy and thermosetting materials because of the ease of which the molds may be made (col. 1, lns. 17-24).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have modified the apparatus of Kimoto as such to have made the mold from cast-epoxy and thermosetting material because it would be easy to construct the mold from these materials as suggested by Nomura.

8. Claims 2 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimoto modified by Nomura as applied to claims 1, 3-7, and 10 above, and further in view of Valyi (US Pat. No. 3,670,066; previously of record) and Gardner (US Pat. No. 4,342,717; previously of record).

Kimoto and Nomura disclose the apparatus as described above. Kimoto and Nomura fail to teach the relief valve to be adjustable for accommodating resin with different pressure and flow characteristics, with the valve being adjusted by a threaded screw supporting the spring bias biasing the movable pin.

Art Unit: 1722

Valyi teaches an injection molding apparatus wherein a relief path (35) is created with using a spring biased valve (36) wherein the spring bias (24) is held by a threaded screw (26).

It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to have modified the apparatus of Kimoto and Nomura as such to have used a threaded screw arrangement to support the spring bias because this is a suitable arrangement for the construction of a relief valve as taught by Valyi and further because this would allow for adjustment of the spring bias acting on the valve. It is further noted that generally the provision apparatus adjustability, where needed, is seen as an unpatentable advance. In re Stevens, 212 F.2d 197, 101 USPQ 284 (Cust. & Pat. App. 1954). The reference Gardner is cited as further showing that the provision of making pressure relief valves adjustable is known in the art, as Gardner teaches a relief valve structure (26) with a spring bias (25), the valve being adjustable to accommodate different molding conditions (see col. 3, lns. 25-32).

9. Applicant's arguments filed August 13, 2002 have been fully considered but they are not persuasive.

Art Unit: 1722

Applicant argues that claim 1 provides that molded part is released simultaneously from the mold when a certain pressure in the first molten resin flow path is reached, and that this feature is not taught by the prior art of record.

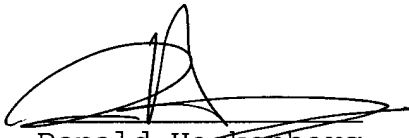
As noted above in the rejection under 35 U.S.C. 112, second paragraph, the limitation recited in claim 1 is not understood. Although Applicant's argument seems to suggest that a certain pressure within the mold cavity causes the molded part to be released from the cavity, the claim language does not recite this feature, and the passage of the disclosure cited by Applicant, p. 5, lns. 24-27, does not describe such a feature. The cited part of the specification provides that the molded part is ejected from the mold cavity as a whole, with the molded part including the resin molded in the first resin flow path, and the second resin flow path. As noted in the rejection under 35 U.S.C. 103 above, this feature is taught by Kimoto.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (703) 308-6371. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

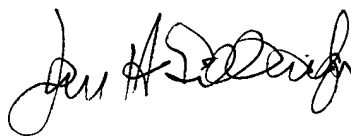
Art Unit: 1722

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Jan Silbaugh, can be reached at (703) 308-3829. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for responses to non-final action, and 703-872-9311 for responses to final actions. The unofficial fax phone number is (703) 305-3602.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Donald Heckenberg
September 12, 2002



JAN H. SILBAUGH
SUPERVISORY PATENT EXAMINER
ART UNIT 1722

09/16/02